

Final Review #4

$$\textcircled{1} \quad -6(3x+9) = -18x-54$$

$$-\frac{5}{6}(12x-42) = -10x+35$$

$$\textcircled{2} \textcircled{a} \quad 10 \cdot 5 - 35 + 5 + 7 \cdot (-8)$$

$$50 - 35 + 5 - 56 = -36$$

$$\textcircled{b} \quad 5(-7+2) + 23 - 12$$

$$-25 + 23 - 12 = -14$$

$$\textcircled{c} \quad \frac{8+7 \cdot (-5+2)}{13+4^2} = \frac{8-21}{13+16} = -\frac{13}{29}$$

$$\begin{aligned} \textcircled{\#3} \quad 5x - 24 &= 30 \\ +24 \quad +24 \\ 5x &= 54 \\ x &= 10.8 \end{aligned}$$

$$\begin{aligned} \textcircled{c} \quad \frac{x-7}{3} &= 12 \cdot 3 \\ x-7 &= 36 \\ +7 \quad +7 \\ x &= 43 \end{aligned}$$

$$\begin{aligned} \textcircled{e} \quad \frac{x-3}{4} &\swarrow \searrow \frac{x+2}{5} \\ 5x-15 &= 4x+8 \\ -4x \quad -4x \\ x-15 &= 8 \\ +15 \quad +15 \\ x &= 23 \end{aligned}$$

$$\begin{aligned} \textcircled{b} \quad 2(x-8) &= 6x+13 \\ 2x-16 &= 6x+13 \\ -2x \quad -2x \\ -16 &= 4x+13 \\ -13 \quad -13 \\ -29 &= 4x \end{aligned}$$

$$\begin{aligned} \textcircled{d} \quad \frac{3(x-4)}{2} &= \frac{4(x+6)}{1} \cdot 2 \\ 3x-12 &= 8x+48 \\ -3x \quad -3x \\ -12 &= 5x+48 \\ -48 &= 5x \\ x &= -12 \end{aligned}$$

$$\begin{aligned} \textcircled{f} \quad \frac{1}{x} &\swarrow \searrow \frac{5}{8} \\ 5x &= 32 \\ x &= 6.4 \end{aligned}$$

$$\textcircled{4} \textcircled{a} \quad 3x + 5 \leq 23$$

$$\quad \quad -5 \quad -5$$

$$3x \leq 18$$

$$x \leq 6$$



$$\textcircled{b} \quad -3x - 4 > 11$$

$$\quad \quad +4 \quad +4$$

$$\frac{-3x}{-3} > \frac{15}{-3} \quad \text{switch sign}$$

$$x < -5$$



$$\textcircled{c} \quad 5(x-8) \leq 3x+12$$

$$5x - 40 \leq 3x + 12$$

$$\quad -3x \quad \quad -3x$$

$$2x - 40 \leq 12$$

$$\quad +40 \quad +40$$

$$2x \leq 52$$

$$x \leq 26$$



$$⑤ f(x) = 3x + 2$$

$$① f(3) = 3(3) + 2$$

$$= 11$$

$$② f(4) = 3(4) + 2$$

$$= 14$$

$$③ f(-3) = 3(-3) + 2$$

$$= -7$$

$$⑥ f(x) = 3x + 2 \quad f(x) = 50$$

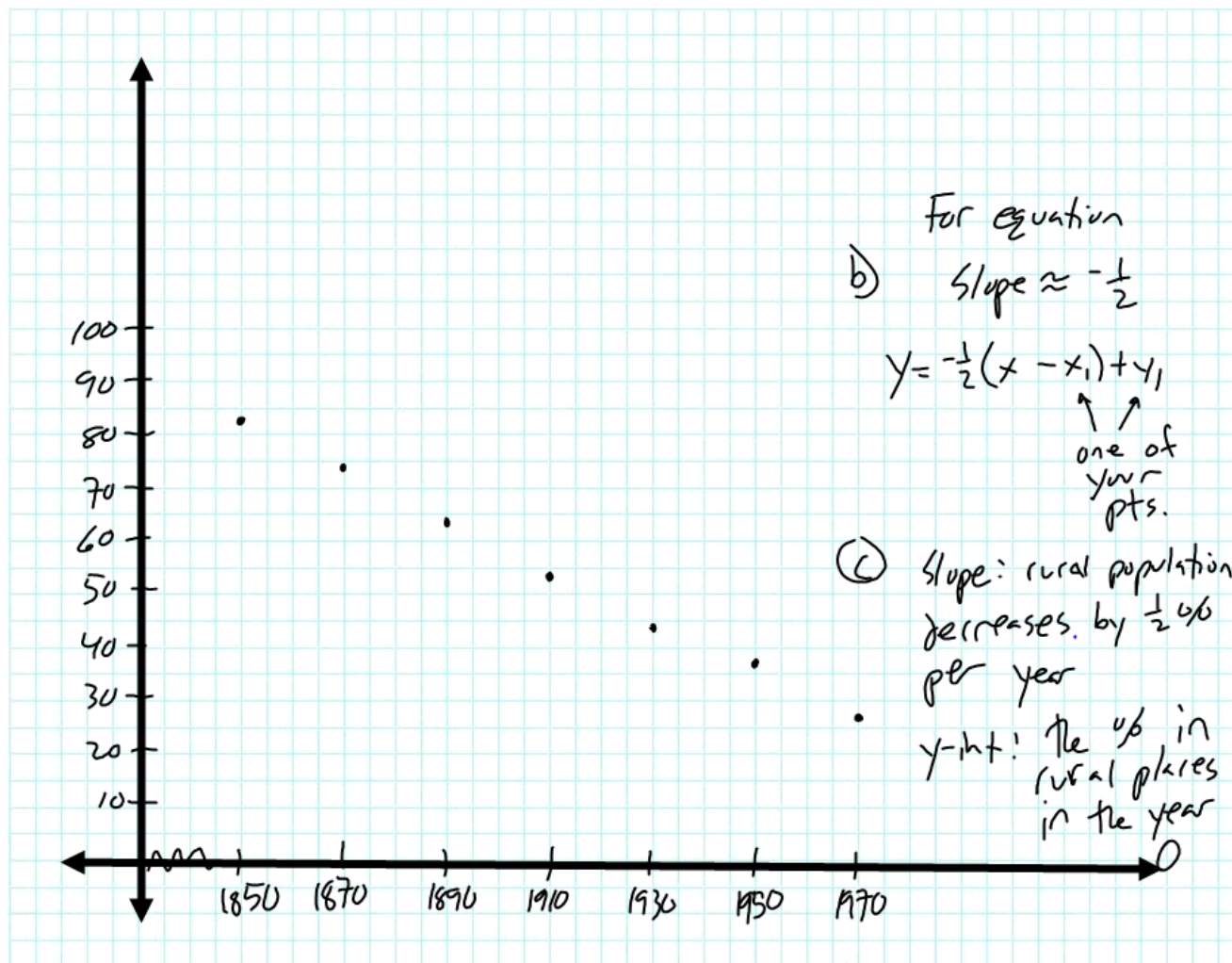
$$50 = 3x + 2$$

$$-2 \quad -2$$

$$\frac{48}{3} = \frac{3x}{3}$$

$$16 = x$$





d) $50 = \text{your eq.}$
solve for x

≈ 1913

e) $0 = \text{your eq.}$
solve for x

≈ 2010
when it happens